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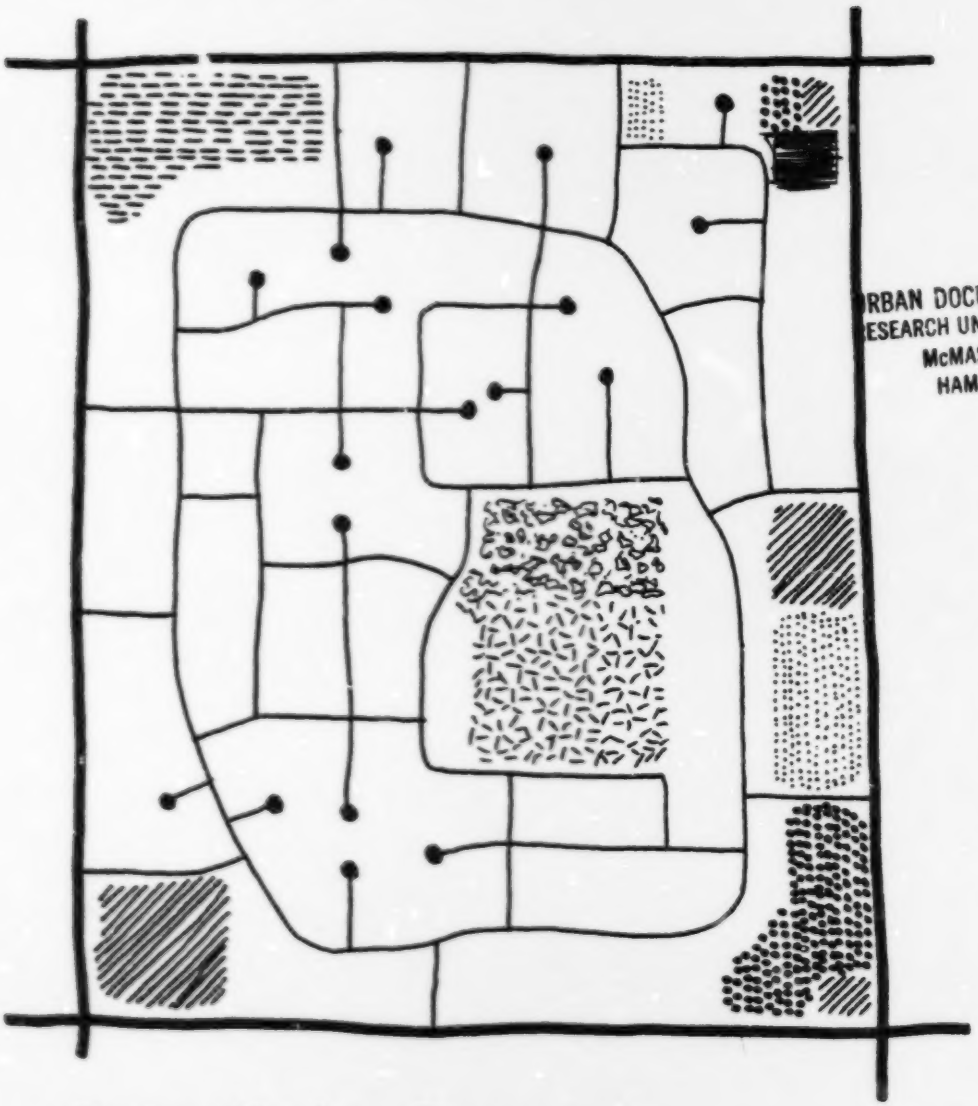
Secondary Plan Commercial Design Standards



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McMASTER UNIVERSITY
HAMILTON, ONTARIO

Planning and Development Department
Hamilton-Wentworth Region

Revised August 1983

SECONDARY PLAN

COMMERCIAL DESIGN STANDARDS

REPORT

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McMASTER UNIVERSITY
HAMILTON, ONTARIO

Planning and Development Department

Hamilton-Wentworth Region

revised August, 1983
(WPO 98P)

006170

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REPORT
SUMMARY

The study findings reveal the following:

- The existing population in the study area is approximately 111,000. The estimated additional future population in the area is 87,000;
- the existing commercial inventory in the study area is sufficient to meet the shopping requirements of the existing population;
- the need for additional commercial centres in the south mountain area will increase relative to the growth in population. Accordingly, a set of design standards should be adopted as policy to guide the planning and development of such commercial centres.
- the design standards established in this study should be introduced in the Official Plan as a policy. In this regard an amendment to the Official Plan should be initiated.

SECTION 1 - INTRODUCTION, PURPOSE AND STUDY AREA

Introduction

The lack of specific commercial design standards has made the planning of future commercial areas in undeveloped neighbourhoods difficult.

Purpose

Existing retail commercial shopping facilities provide a vital service to the residents of the City. In this regard, the type, location and size of additional shopping facilities should be planned to ensure their equitable distribution while maintaining the viability of existing commercial areas. To achieve this objective, it is necessary to establish a set of appropriate design standards. Such commercial design standards should take into consideration: changing consumer shopping patterns; changing marketing techniques; and increasing costs in goods and services. These elements, and others which are less tangible, contribute to determine the location, size and type of commercial facilities.

The Study Area

The study area consists of the entire mountain area of the City (see Map 1). This area is divided into neighbourhoods. Accordingly, data compiled for this study was carried out on a neighbourhood basis. The study area is characterized by:(1)

58 neighbourhoods of which:

- 28 are fully developed;
- 13 are developing; and
- 17 are undeveloped (see Map 1).

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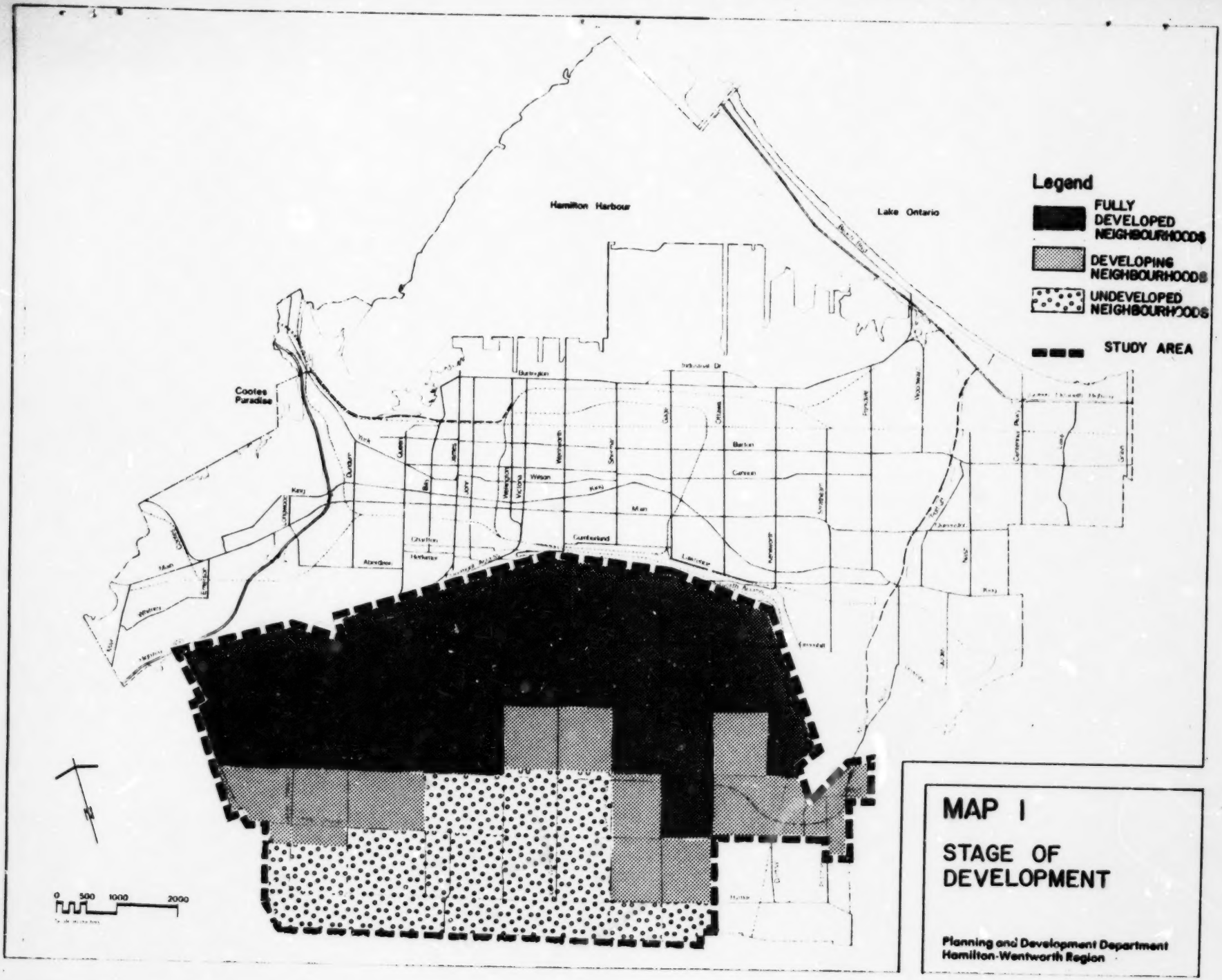
(1) - Fully developed neighbourhoods are fully matured with no vacant lands.
- Developing neighbourhoods are partly vacant.
- Undeveloped neighbourhoods are mostly vacant.


Hamilton Harbour
Lake Ontario
Cootes Paradise
Legend
FULLY DEVELOPED NEIGHBOURHOODS
DEVELOPING NEIGHBOURHOODS
UNDEVELOPED NEIGHBOURHOODS
STUDY AREA
0 500 1000 2000
MAP 1
STAGE OF DEVELOPMENT
Planning and Development Department
Hamilton-Wentworth Region

The study area has recently experienced a major increase in the retail commercial inventory. In particular, changes have occured to the areas' quantity and distribution of retail commercial facilities. The principle change has been the addition of a number of new shopping centres and more significantly the sub-regional shopping centre (The Limeridge Mall). The Mall provides a total retail space of approximately 68,500 m^2 representing an increase of approximately 40% to the existing inventory.

SECTION 2 - CHARACTERISTICS OF EXISTING COMMERCIAL AREAS

Introduction

The existing retail commercial facilities in the study area offers a wide range of goods and services to the residents. They vary in size, location and the level of shopping opportunities. For example, convenience stores, generally cater to the daily needs of local residents, while larger department store and supermarkets meet the needs of a much larger population.

All these commercial facilities provide different services to the population of the study area. Accordingly, the existing inventory of commercial establishment in the area can be grouped and categorized to highlight their level of importance.

Each category of commercial activity in the study area is differentiated by size and primary function as follows:

- sub-regional shopping centres;
- community shopping centres;
- neighbourhood shopping centres;
- convenience shopping centres; and
- extended commercial areas.

Sub-Regional Shopping Centres

The sub-regional shopping centre (Limeridge Mall), ranks first in the retail commercial hierarcy. Relative to other shopping opportunities in the area, the Mall offers the widest range of goods and services in one location. The Mall has 3 major department stores and a supermarket which function as a major anchor to the rest of the retail opportunities in the Mall.

Sub-regional shopping centres such as the Limeridge Mall are usually designed to serve the shopping needs of a large population over a large geographic area.

Leading tenants are one or more large major department stores (Eaton's, Sears, Robinsons) and a major supermarket (Dominion). These centres are commonly

located at the intersections of expressways and/or freeways to benefit from high traffic volumes and accessibility.

Sub-regional centres are normally designed for a minimum support population of 150,000(1). In this regard, given that the capacity population of the study area is expected to exceed 150,000, it is assumed that the catchment area of Limeridge Mall is primarily the study area.

Community Shopping Centres

Community shopping centres rank second in the commercial hierarchy. These centres, generally consist of a supermarket, minor department store (K-Mart, Woolco) and a number of specialty stores. The main function of a community shopping centre is to provide retail shopping opportunities for the sale of food products, wearing apparel and appliances. Leading tenants in these centres are supermarkets, variety stores and a small department store. These centres are usually located at the intersections of major arterial roads and/or expressways. Community shopping centres are usually designed to serve a population of 35,000(2).

There are 5 community shopping centres in the study area all of which are located east of Upper James. They range in floor area to a maximum of approximately 20,000 m^2 with a site area of 5.0 hectares.

Neighbourhood Shopping Centres

Neighbourhood shopping centres rank third in the hierarchy. These centres are designed to cater to the needs of two or more neighbourhoods. The main function of a neighbourhood shopping centre is to provide shopping opportunities for the sale of food product convenience goods and personnel services. Leading tenants are usually supermarkets and drugstores. These centres are often located at the intersections of two arterial roads or at the intersections of arterial and collector roads.

Neighbourhood shopping centres are usually designed to serve a population of 15,000(3). There are 11

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(1) Planning Design Criteria, Joseph de Chiara, Lee Koppelman 3rd edition, Reinhold Company, 1982.
(2) Ibid
(3) Standard used by major anchor tenants in neighbourhood shopping centres.

neighbourhood shopping centres in the study area; they range in floor area to a maximum of approximately 10,000 m^2 and a site area of 3 hectares.

Convenience Shopping Centres

Convenience shopping centres rank fourth in the hierarchy. These centres are designed to cater to the needs of area residents in a neighbourhood. The main function of a convenience shopping centre is to provide daily food goods and personal services. Leading tenants are usually drug outlets and convenience food marts. These centres are often located at the intersections of arterial and collector roads.

Convenience shopping centres are usually designed to serve a minimum population of 4000(1). There are 17 such centres existing in the study area at present. They range in floor area to a maximum of 2500 m^2 with a site area of less than 1 hectare.

Extended Commercial Areas

Extended commercial areas rank fifth in the commercial hierarchy. This form of commercial activity generally occurs along arterial roads. These areas are best described as a cluster of continuous individually operated commercial establishments. Extended commercial areas normally lack the presence of a major anchor store.

The primary function of extended, commercial areas within the study area is highway oriented. Notwithstanding their primary function, extended commercial areas also provide commercial facilities which serve the daily needs of local residents to virtually serving the needs of the transient shopper and commuter. These forms of retail facilities usually front directly on arterial roads to benefit from the large traffic volume, transient shoppers, and high visibility.

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(1) Planning Design Criteria, Joseph de Chiara, Lee Koppelman 3rd edition, Reinhold Company, 1982.

Characteristics of Shopping Centres

It should be noted that while by definition different shopping centres are described as having different primary functions, in reality their viability depends on how successfully they are able to relate to each other within a given market area and population. However, there are some inherent differences between shopping centres. In this regard, Table 1 highlights the functional and locational characteristics of each centre.

TABLE 1 - CHARACTERISTICS OF COMMERCIAL FACILITIES IN THE STUDY AREA

	SUB-REGIONAL SHOPPING CENTRE	COMMUNITY SHOPPING CENTRE	NEIGHBOURHOOD SHOPPING CENTRE	CONVENIENCE SHOPPING CENTRE	EXTENDED COMMERCIAL AREAS
Major function	Some functions of Community Centre plus sale of general merchandise, apparel, furniture, etc.	Some functions of the Neighbourhood Centres plus sale of department store type goods (i.e. wearing apparel, appliances	Sale of food goods and personal services	Sale of convenience foods and personal services	The sale of general merchandise
Usual leading tenants	One or more large, major department stores and at least one supermarket	Minor department stores, supermarket	Supermarket and/or drugstore	Drugstore and/or convenience food marts	Individual stores, no major anchor stores
Location	Intersections of express-ways and/or freeways	Intersections of arterial roads and/or expressways	Intersections of arterial roads	Intersections of arterial and collector roads	Arterial roads
Min. population to support centre	150,000	35,000	15,000	4000	N/A
Maximum site area (Gross land area)	40.0 ha	5.0 ha	3.0 ha	0.4 ha	N/A

SECTION 3 - INVENTORY OF COMMERCIAL FACILITIES

Introduction

In an effort to catalogue the existing inventory of commercial facilities in the study area, a survey was conducted which identified the total food and non-food retail space. The food retail space includes supermarkets, food stores and specialty food stores, restaurants, variety stores and food related stores. The non-food retail space includes major and minor department stores, specialty shops, hardware stores, clothing and shoe stores, furniture and appliance stores, general merchandising stores, and other individually operated non-food stores.

To highlight only that portion of the total retail space which is utilized for retail activity, basements, storage and administrative areas were excluded from the survey. Retail space directly associated with the automotive industry, such as service stations and motor vehicle dealerships are not included in this inventory since they are not considered as department store type retail establishments.

Existing Inventory

The study area has over 840 retail commercial establishments of which only 45 were vacant at the time when the survey was carried out(1). Of the total area that was surveyed, an estimated 240 are food and food-related establishments and 555 are non-food or department store type merchandising. The total retail space inventory in the study area is approximately 241,000 m^2 (see Table 2). Approximately 9000 m^2 or less than 4% of the total available retail space is vacant.

The largest concentration (over 60%) of the total retail commercial space is located in the area east of Upper Wentworth and north of the proposed freeway alignment. In contrast, the developing area south of the proposed freeway alignment has a low inventory of retail space (see Map 2).

Generally, the existing inventory of food and non-food retail space in the study area is distributed in a

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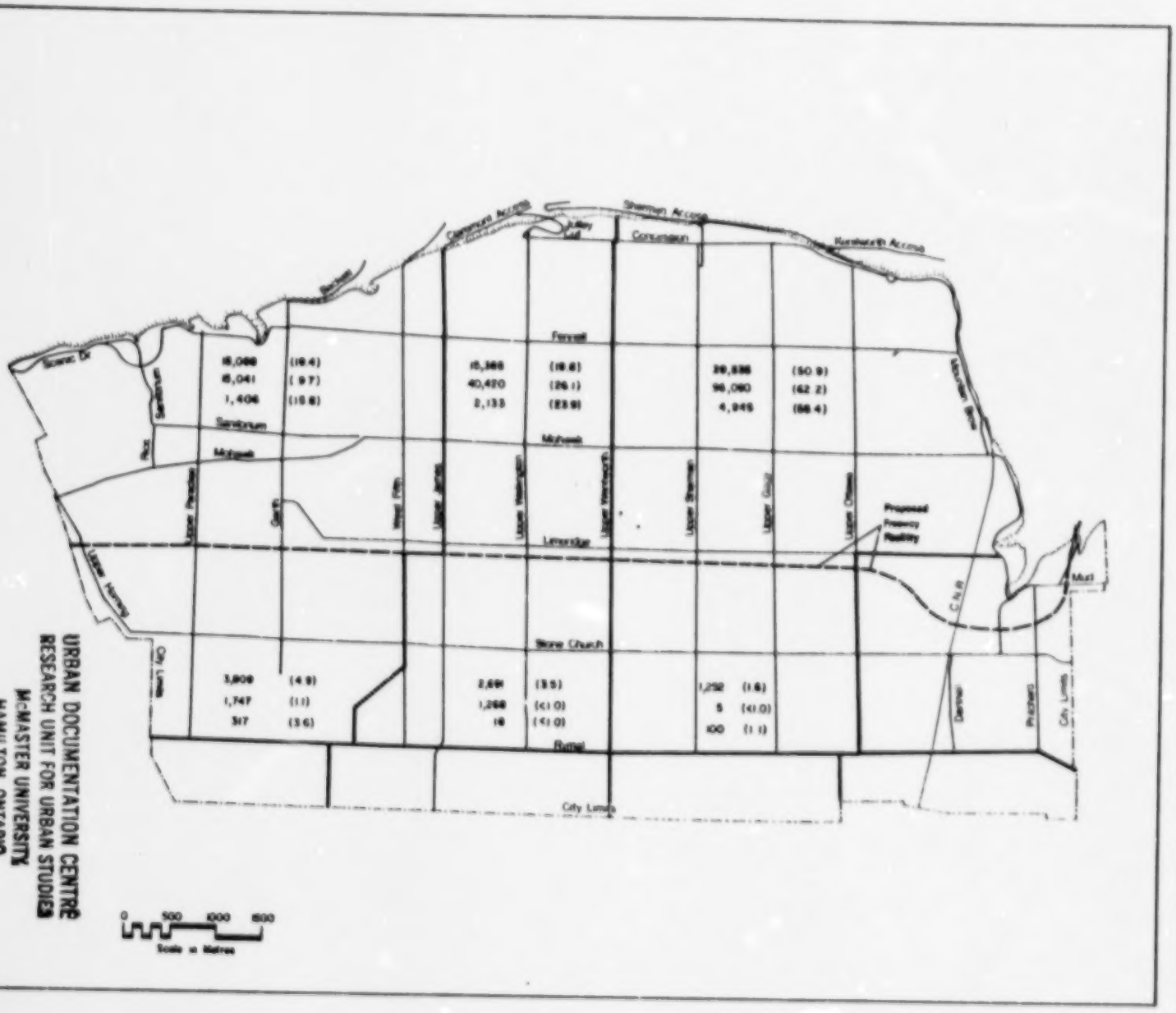
(1) The survey was conducted in 1980. The inventory was catalogued and tabulated from information available from the Provincial Assessment records. Individual site inspections were also carried out to verify some of the findings. Since that time the study area has not experienced major additions to its commercial inventory.



Legend

Food
Non-Food
Vacant
( ) Percentage of total per type
Areas represented in square metres

Total For Study Area	
Food	77,760
Non-Food	154,571
Vacant	8,919
Total	241,250

N

Map 2
Distribution of Existing Retail Floor Space

Planning and Development Department
Hamilton Wentworth Region

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TABLE 2 - EXISTING RETAIL FLOOR AREA (M^2)

FOOD	NON-FOOD	SUB-TOTAL	VACANT	TOTAL
77,760	154,571	232,331	8919	241,250

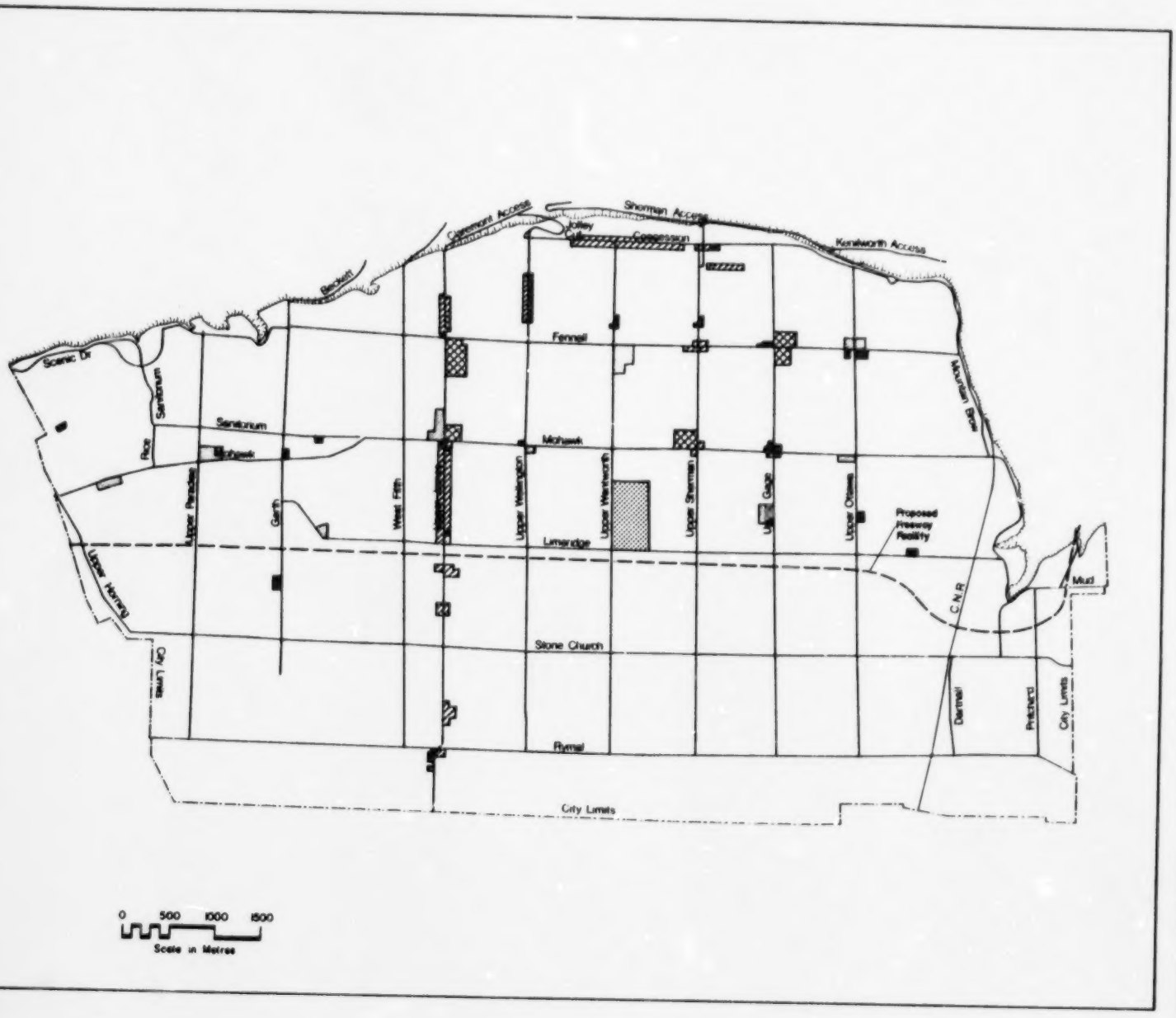
manner where practically each neighbourhood in the area is served by shopping opportunities, specialty store, and other individual stores (see Map 3).

Of the total existing space in the study area comprising of food and non-food space, the largest inventory is in the non-food type merchandising. However, depending on the area the concentration of space between food and non-food varies significantly. For example, in the older and developed parts of the study area, where the majority of the existing population is concentrated, the concentration of non-food merchandising establishments is much higher than in other parts of the study area.

Conversely, in the newer and developing parts of the study area the concentration of food establishments is much greater than non-food establishments. For example, of the total 10,800 m^2 of retail space in the area south of the proposed freeway facility, approximately 7800 m^2 or 75% is food related.

The average size of a food type facility in the area is approximately 325 m^2. The average size of non-food type facility is 280 m^2. The largest non-food facility is the Sears department store in Limeridge Mall, with over 13,800 m^2 of retail shopping space.

Next to Limeridge Mall, the Mountain Plaza, located at Fennell Avenue and Upper James Street, represents the single largest shopping centre in the study area with over 8% of the total existing food and non-food retail space in the area.



Legend

- Regional Shopping Centre
- Community Shopping Centre
- Neighbourhood Shopping Centre
- Convenience Shopping Centre
- Extended Commercial Areas

N

Map 3

Distribution of Existing Commercial Centres

Planning and Development Department
Hamilton Wentworth Region

Limeridge Mall represents approximately 28% of the total retail space. Community shopping centres represent over 22% of the total space in the area. The neighbourhood and convenience shopping centres together represent over 27% of the total retail space. The extended commercial areas constitute over 18% of the total retail space (see Table 3).

TABLE 3 - EXISTING RETAIL FLOOR AREA PER CENTRE (M^2)

		% OF TOTAL
Sub-Regional Shopping Centre (Limeridge Mall)	68,469	28.4
Community Shopping Centre	53,507	22.2
Neighbourhood Shopping Centre	43,403	17.9
Convenience Shopping Centre	22,455	9.2
Extended Commercial Areas	44,857	18.6
Vacant	8,919	3.7
TOTAL	241,250	100.0%

TABLE 4 - PERCENT FOOD AND NON-FOOD SPACE PER TYPE OF CENTRE

	FOOD	NON-FOOD
Sub-regional Shopping Centre	11.4	38.5
Community Shopping Centre	19.0	24.9
Neighbourhood Shopping Centre	27.9	11.0
Convenience Shopping Centre	14.8	7.3
Extended Commercial Areas	26.9	18.2

Table 4 illustrates that the sub-regional shopping centre and community shopping centres are major non-food shopping nodes. In fact, over 60% of the existing inventory of non-food space is concentrated in these centres. Conversly, neighbourhood and convenience shopping centres are major food shopping nodes. Almost 50% of the total food space in the study area is located in these shopping centres.

SECTION 4 - COMMERCIAL LAND USE ANALYSIS

Introduction

To establish commercial design standards, it is essential to begin by determining the extent to which the existing retail commercial facilities are able to meet the present shopping requirements of the existing population. This can be assessed by examining the relationship between current retail expenditure and sale levels of retail facilities.

Assessment of Existing Commercial Areas

The per capita retail expenditures for food and non-food products in 1981 for the Hamilton Metropolitan area has been estimated to be approximately $2970[1]. This expenditure does not include the sale of motor vehicle and service stations. Of this total, an estimated $1055 per capita is spent on food and food related type merchandising. The remaining $1915 is spent on non-food type merchandising. By multiplying the current population in the study area (110,500)[2] by the corresponding estimated current per capita expenditures for food and non-food merchandising, the potential retail expenditure of the study area is determined. Accordingly, a population of 110,500 can have the potential of spending an estimated $117 million (110,500 x $1055/capita) in food type merchandising and $212 million (110,500 x $1915/capita) in non-food type merchandising.

The average median sales in food and non-food type establishments in shopping centres is estimated to be $1760/$m^2$ and $1450 respectively[3].

The sale estimate for the food merchandising includes establishments such as supermarkets, convenience markets, delicatessen stores, bakeries, and food services such as restaurants. The sale estimate for the non-food merchandising includes establishments such as department stores, clothing stores, shoe stores, home appliances, and specialty stores. When the estimated total expenditure for food and non-food merchandising are divided by these sale values, the potential need of retail space in food and non-food type establishments can be determined. Accordingly, the potential need of retail space in food type

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(1) Source for this estimate was "The Financial Post - Canadian Markets, 1982).

(2) Hamilton-Wentworth Planning and Development Department population characteristics.

(3) Source for this estimate was "Dollars and Cents of Shopping Centres - 1981, ULI - The Urban Land Institute".

establishments of the existing population in the area is estimated at 66,500 m^2 ($117 million - 1760/$m^2$. The retail space requirements in the non-food type establishments of the population is estimated to be 146,200 m^2 ($212 million - 1450/$m^2$).

When the existing retail inventory in food and non-food space of the area is compared to the estimated potential retail space requirements, it is evident that the existing population is adequately served by the existing retail establishments in the area. For example, the potential food space requirements of the area's population has been estimated to be 66,500 m^2, the existing inventory in the area is 77,760 m^2. The potential of non-food space requirements of the area's population has been estimated to be 146,200 m^2, the existing inventory in the area is over 154,500 m^2.

SECTION 5 - COMMERCIAL LAND USE PLANNING STANDARDS

Introduction

Given the recent construction of the sub-regional shopping centre (Limeridge Mall), its size, location and service area, it is doubtful that another such centre will locate in the same general area. Therefore, the planning of future additional commercial facilities in the area should exclude sub-regional shopping centres.

Extended commercial retail facilities play an important role in the total commercial structure of the area. However, because of their unplanned nature, they are considered not to be an inherent part of a neighbourhood. In this regard, a design standard for extended commercial areas is not required.

However, community, neighbourhood and convenience shopping centres are considered to be integral to the neighbourhood planning process. As such they will have a significant role in the planning and development of future neighbourhoods in the area south of the proposed east-west freeway facility. Accordingly, to assist in the planning of shopping centres in this area, a number of design standards should be established. These standards will be for community, neighbourhood and convenience type shopping centres.

Planning Standards

To establish a set of design standards for the area south of the proposed east-west freeway facility, the gross floor area and the site area requirements of each shopping centre type were reviewed.

The "Planning Design Criteria"(1) recommends a number of general criteria to guide the planning and development of shopping centres. While the essence of these criteria is reflected in this study, they have been modified to ensure their applicability to the study area (the area south of the proposed east-west freeway facility). Therefore, the standards to be used in this study are as follows:

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(1)Planning Design Criteria, Joseph de Chiana, Lee Koppelman 3rd edition, Reinhold Company, 1982.

- 35,000 persons for a community shopping centre;
- 15,000 persons for a neighbourhood shopping centre; and
- 4,000 persons for a convenience shopping centre.

On the basis of the above criteria, generalized locations for each type of shopping centre have been identified on Map 4.

The site area requirement of each type of shopping centre is based on three times the gross floor area which takes into consideration the following parameters:

- the gross floor area needs of each use;
- the parking, loading and maneuvring requirements; and
- the landscaping, buffering and siting needs. (See Table 5.)

A gross floor area of approximately 16,000 m^2 for a community shopping centre serving a population of 35,000 would require a site area of 4.8 hectares (48,000 m^2). This would translate to 1400 m^2/1000 persons (0.14 ha/1000 persons).

A gross floor area of approximately 11,000 m^2 for a neighbourhood shopping centre serving a population of 15,000 would require a site area of 3.21 hectares (32,100 m^2). This would translate to 2140 m^2/1000 persons (0.21 ha/1000 persons).

A gross floor area of approximately 1400 m^2 for a convenience shopping centre serving a population of 4000 would require a site area of 0.41 hectares (4110 m^2). This would translate to 1000 m^2/1000 persons (0.10 ha/1000 persons).

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(1) This estimated population is calculated by:

- applying the revised population design guidelines to areas with approved neighbourhood plans; and,
- applying the gross population density policy of the Official Plan to areas with no approved neighbourhood plan.

TABLE 5 - GENERALIZED SHOPPING CENTRE RETAIL SPACE NEEDS

SHOPPING CENTRE TYPE	TENANT	ESTIMATED RETAIL FLOOR AREA REQUIRED (m^2)	ESTIMATED SITE AREA REQUIRED (3 x FLOOR AREA)	
COMMUNITY	Minor Department Store	5,000		
	Supermarket	5,000		
	Clothing	1,000		
	Hardware	1,000		
	Drugs	800		
	Personal Services	800		
	Shoes	800		
	General Merchandising	600		
	Specialty	500		
	Other	500		
	TOTAL	16,000	48,000 m^2	4.80 ha
NEIGHBOURHOOD	Supermarket	4,500		
	Clothing	1,000		
	Hardware	1,000		
	Drugs	800		
	Personal Services	800		
	Shoes	800		
	General Merchandising	600		
	Specialty	600		
	Other	600		
	TOTAL	10,700	32,100 m^2	3.21 ha
CONVENIENCE	Drugs	450		
	Convenience food	300		
	General Merchandising	250		
	Laundramat	110		
	Restaurants	110		
	Salons	70		
	Other	80		
	TOTAL	1,370	4,110 m^2	0.41

When these standards are applied to the planned population of 87,000[1], the future shopping space needs for this area can be determined. It is estimated that the entire area will require a total of almost 39 hectares of shopping space or 390,000 m^2 (87,000 population x 1400 m^2/1000 persons for community shopping centres and 87,000 population x 2140 m^2/1000 persons for neighbourhood shopping centres and 87,000 population x 1000 m^2/1000 persons for convenience shopping centres).

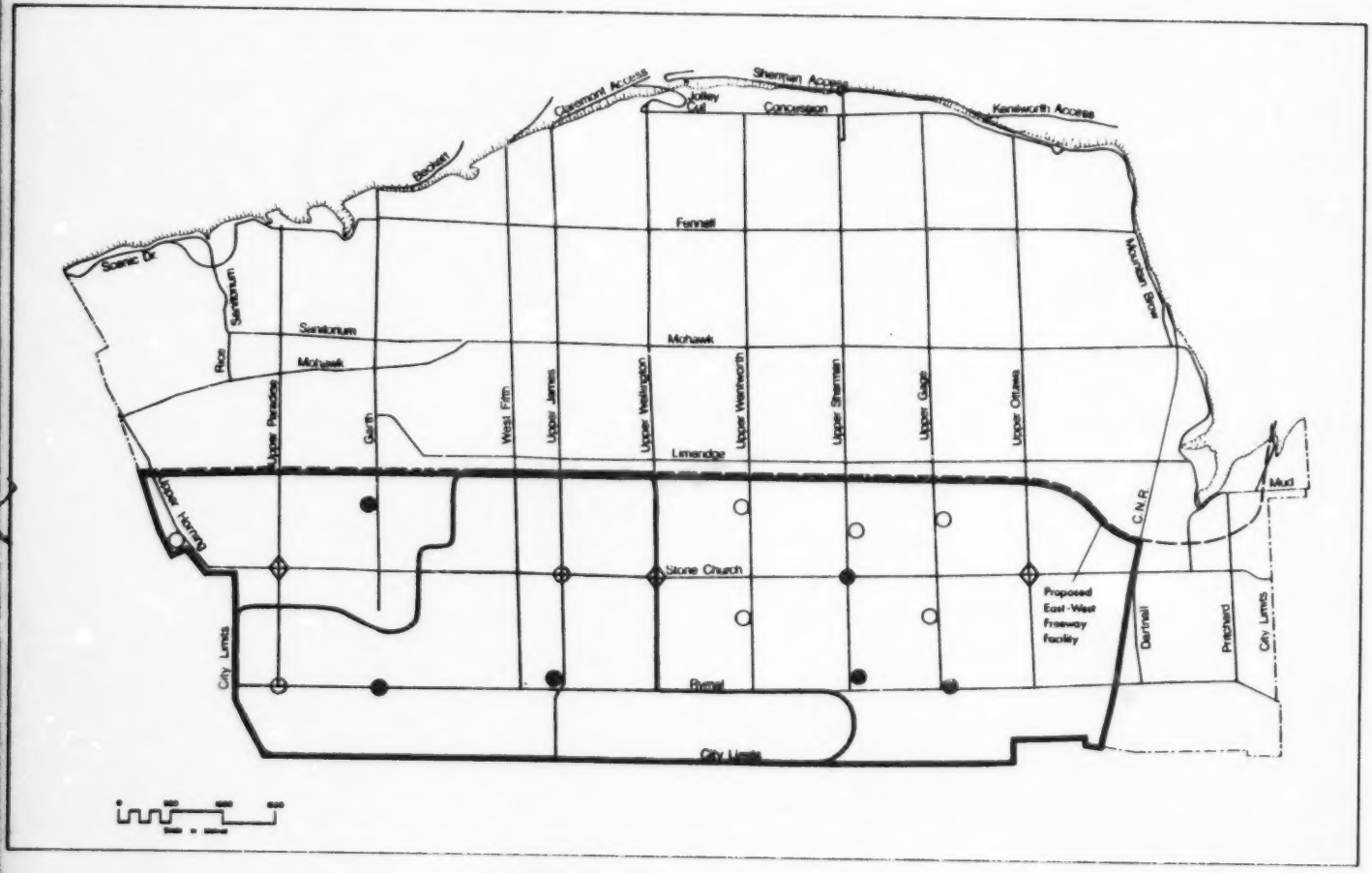
The area is presently served by approximately three hectares of existing commercial area. This means that an additional 36 hectares of site area for community, neighbourhood and convenience type shopping facilities will be required when the estimated design population in this area is realized. A review of all the approved neighbourhood plans indicates that an estimated 30 hectares are already planned for future commercial uses. This suggests that there is a need to plan for an additional 6 hectares for commercial uses in the area south of the proposed east-west freeway facility. Given that 11 of the 26 neighbourhoods in the area do not have approved neighbourhood plans, this additional commercial area requirement can be accommodated in the planning of those neighbourhoods (Map 4).

In an effort to determine more accurately the additional commercial needs of the study area, the area south of the proposed east-west freeway facility was divided into three sub-areas (see Map 5).

Sub-Area "A"

Sub-area "A" (east of Upper Wentworth Street), consisting of nine neighbourhoods, is estimated to have a design population of 29,500.

A design population of 29,500 would require an estimated commercial area of 13.3 hectares or 133,000 m^2 (29,500 persons x 1400 m^2/1000 persons for community shopping centres, 29,500 x 2140 m^2/1000 persons for neighbourhood shopping centres and 29,500 persons x 1000 m^2/1000 persons for convenience shopping centres). The area is presently served by a total 0.4 hectare of commercial area. This means that an additional 12.9 hectares will be required to meet the shopping needs of the design population in the area. A review of the approved neighbourhood plans in the area reveals that an estimated 18.0 hectares of commercial area is already planned. Since there is an excess of reserved commercial area, the need to plan for additional commercial areas is questionable (see Map 5).



Legend

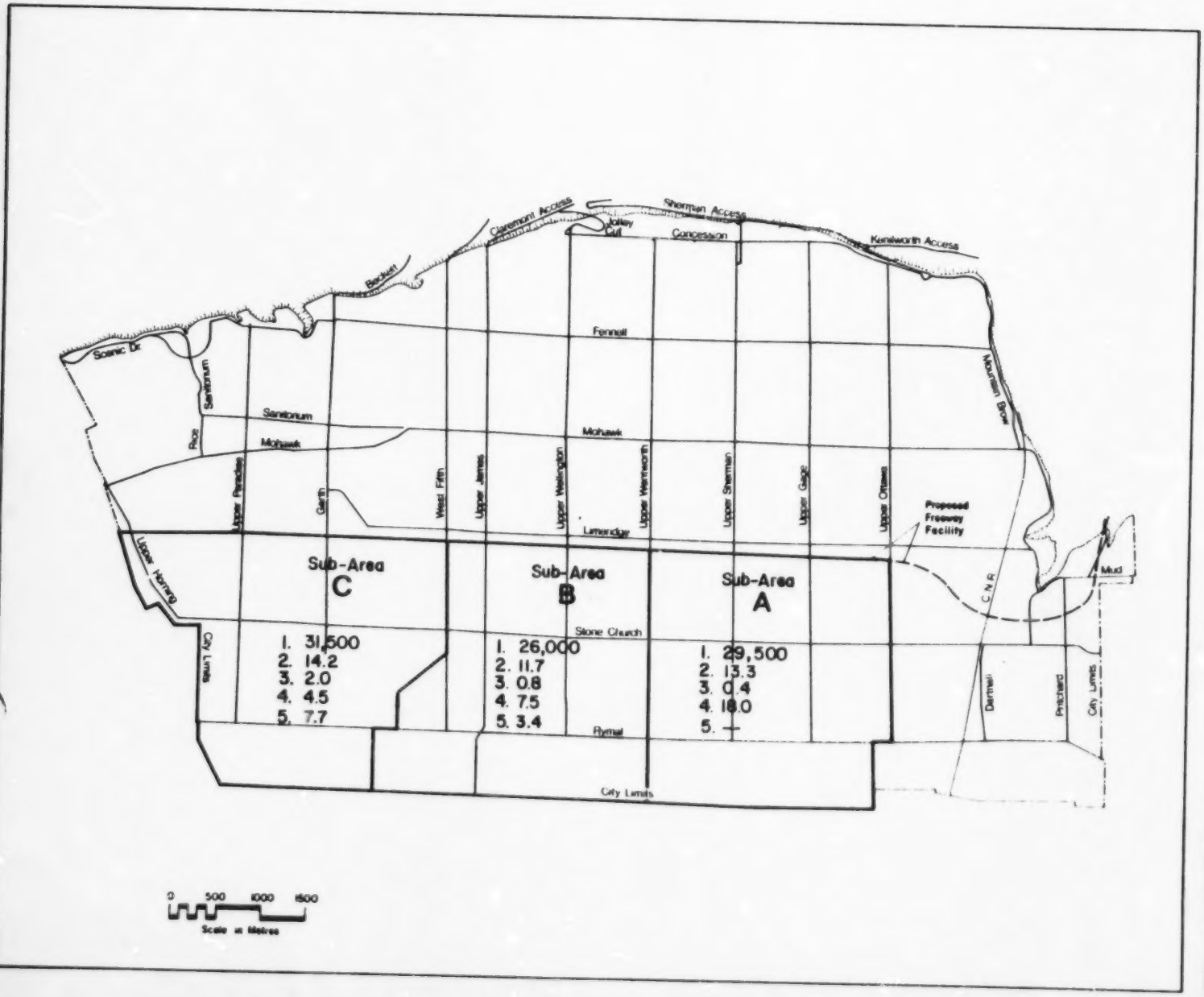
- ◇ Community Shopping Centres
- ● Neighbourhood Shopping Centres and
- ○ Convenience Shopping Centres
- ▭ Area with no Approved Neighbourhood Plans

N

Map 4

Generalized Locations of Shopping Centres

Planning and Development Department
Hamilton-Wentworth Region



Legend

1. Estimated Population
2. Total Area Required
3. Existing Area
4. Planned Area
5. Additional Area Required

Areas represented in hectares

N

Map 5

Estimated Site Area Requirements

Planning and Development Department
Hamilton West-north Region

Sub-Area "B"

Sub-area "B" (between Upper Wentworth Street and the existing and proposed alignment of West Fifth Street), which consists of nine neighbourhoods, is estimated to have a design population of 26,000. A design population of 26,000 would require an estimated commercial area of 11.7 hectares or 117,000 m^2 (26,000 persons x 1400 m^2/1000 persons for community shopping centres, 26,000 persons x 2140 m^2/1000 persons for neighbourhood shopping centres and 26,000 persons x 1000 m^2/1000 persons for convenience shopping centres). This area is presently served by a total of 0.8 hectares of retail commercial area. This would mean that an additional 10.9 hectares will be required to meet the total shopping needs of the capacity population of the area.

A review of the approved neighbourhood plans in the area reveals that an estimated 7.5 hectares have already been planned. Thus there is an additional need of 3.4 hectares in commercial area. Given that seven of the nine neighbourhoods do not have approved neighbourhood plans, this need can be accommodated when plans are prepared for these neighbourhoods (see Map 5).

Sub-Area "C"

Sub-area "C" (west of the existing and future alignment of West Fifth Street), which consists of eight neighbourhoods, is estimated to have a design population of 31,500. A design population of 31,500 would require an estimated 14.2 hectares or 142,000 m^2 in commercial area (31,500 x 1400 m^2/1000 persons for community shopping centre, 31,500 x 2140 m^2/1000 persons for neighbourhood shopping centre and 31,500 x 1000 m^2/1000 persons for convenience shopping centres). This area is presently served by a total of 2.0 hectares in commercial area. This would mean that an additional 12.2 hectares will be required to meet the total commercial needs of the design population in the area.

A review of the approved neighbourhood plans in the area reveals that an estimated 4.5 hectares have already been planned. Thus there is an additional need of 7.7 hectares in commercial area which should be planned to ensure that the future commercial facilities in the area will satisfy the commercial requirements of the design population. Given that three of the eight neighbourhoods in the area do not have approved neighbourhood plans, the additional 7.7 hectares required can be accommodated when plans are prepared for those neighbourhoods (see Map 5).